

Title (en)

SEPARABLE TOW HOOK BRAKE RELEASE SYSTEM

Title (de)

TRENNBARES ABSCHLEPPHAKENBREMSLÖSESYSYSTEM

Title (fr)

SYSTÈME DE LIBÉRATION DE FREIN DE CROCHET DE REMORQUAGE SÉPARABLE

Publication

EP 3980303 A4 20230809 (EN)

Application

EP 20818018 A 20200604

Priority

- US 201916434405 A 20190607
- US 2020036111 W 20200604

Abstract (en)

[origin: US2020384969A1] A brake release system for a vehicle is described to transfer mechanical movement between two hydraulic actuators. The system includes a first hydraulic system on a removable portion of the vehicle and a second hydraulic system on a main chassis of the vehicle. The two hydraulic systems are mechanically engaged with each other where the removable portion of the vehicle attaches to the main chassis. In this way, a force applied to the removable portion of the vehicle when the vehicle's tow hook is engaged may be transferred to release the parking brake on the main chassis without a hydraulic connection between the removable portion and the main chassis. This may be useful when a removable battery frame with a tow hook makes up a separable rear portion of an electric vehicle, allowing the battery frame to be quickly and efficiently removed from the main chassis of the vehicle.

IPC 8 full level

B60T 11/10 (2006.01); **B60K 1/04** (2019.01)

CPC (source: EP US)

B60L 50/60 (2019.02 - US); **B60L 50/66** (2019.02 - EP); **B60L 53/80** (2019.02 - EP); **B60T 7/20** (2013.01 - EP); **B60T 11/108** (2013.01 - EP US); **B60T 17/043** (2013.01 - EP US); **B60T 17/08** (2013.01 - US); **E21C 29/24** (2013.01 - US); **B60L 2200/40** (2013.01 - EP); **Y02T 10/70** (2013.01 - EP); **Y02T 10/7072** (2013.01 - EP)

Citation (search report)

- [A] US 2015071747 A1 20150312 - DEAHL PAUL [US], et al
- [A] EP 3415385 A1 20181219 - SANDVIK MINING & CONSTRUCTION OY [FI]
- [A] US 5598083 A 19970128 - GASKINS PAUL M [US]
- [A] US 5855467 A 19990105 - CLONCH DAVID M [US], et al
- [A] US 2018334782 A1 20181122 - HUFF BRIAN R [US], et al
- See also references of WO 2020247620A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

US 11305746 B2 20220419; **US 2020384969 A1 20201210**; AU 2020286440 A1 20211118; CA 3136097 A1 20201210; EP 3980303 A1 20220413; EP 3980303 A4 20230809; MX 2021015062 A 20220118; WO 2020247620 A1 20201210

DOCDB simple family (application)

US 201916434405 A 20190607; AU 2020286440 A 20200604; CA 3136097 A 20200604; EP 20818018 A 20200604; MX 2021015062 A 20200604; US 2020036111 W 20200604